

**REMARKS**

Applicant appreciates the Examiner's thorough consideration provided the present application. Claims 3-16, 23, 24, 27 and 32-34 are now present in the application. Claims 3-10, 12, 13, 16, 23, 27 and 32 have been amended. Claims 1, 2, 17-22, 25, 26 and 28-31 have been cancelled. Claims 33 and 34 have been added. Claims 10 and 32 are independent. Reconsideration of this application, as amended, is respectfully requested.

**Claim Rejections Under 35 U.S.C. § 103**

Claims 1-4 and 7-25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Lloyd, U.S. Patent No. 4,397,021, in view of Kump, U.S. Patent No. 4,736,374. Claims 5 and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Lloyd in view of Kump, and further in view of Demke U.S. Patent No. 6,021,276. Claims 26-32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Lloyd in view of Humphrey, *Developing Distributed GPIB Test System Using GPIB-ENET/100 and Existing Ethernet Networks*. These rejections are respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

In light of the foregoing amendments to the claims, Applicant respectfully submits that these rejections have been obviated and/or rendered moot. Without conceding to the propriety of the Examiner's rejections, but merely to timely advance the prosecution of the application, as the Examiner will note, independent claims 10 and 32 have been amended.

Independent claim 10 now recites a combination of elements including “the first control computer is coupled to at least two different instruments”, “the central computer is configured to transfer the program update to at least one of the control computers including the first computer” and “the first computer, upon receipt of the program update, is configured to transfer the program update to one of the at least two different instruments coupled to the first control computer without transferring the program update to another one of the at least two different instruments.”

Independent claim 32 now recites a combination of steps including “a first control computer of the control computers being coupled to at least two different measuring instruments”, “transmitting the program code from the central computer via the second bus to at least one of the control computers including the first computer” and “transmitting the program code from the first control computer to one of the at least two different measuring instruments coupled to the first control computer without transmitting the program code from the at least one of the control computers to another one of the at least two different measuring instruments.”

Support for the above combinations of elements and steps can be found in FIG. 1 and the corresponding descriptions of the specification as originally filed. Applicant respectfully submits that the combinations of elements and steps as set forth in amended independent claims 10 and 32 are not disclosed or suggested by the references relied on by the Examiner.

Lloyd in FIG. 2 discloses that each instrument processor (referred to by the Examiner as the control computer) is coupled to only one test instrument. Kump in FIG. 1 also discloses that each microprocessor (referred to by the Examiner as the control computer) is coupled to only one test instrument. Accordingly, both Lloyd and Kump fail to teach that each instrument processor

is coupled to *more than one instrument*, and therefore fail to teach “the first control computer is coupled to at least two different instruments” as recited in amended claim 10 and “a first control computer of the control computers being coupled to at least two different measuring instruments” as recited in amended claim 32.

Although Humphrey in FIG. 2 discloses that the GPIB-ENET/100 (referred to by the Examiner as the control computer) is coupled to multiple GPIB instruments, Humphrey nowhere teaches that those multiple GPIB instruments are *different* instruments. Therefore, Humphrey also fails to teach “the first control computer is coupled to at least two different instruments” as recited in amended claim 10 and “a first control computer of the control computers being coupled to at least two different measuring instruments” as recited in amended claim 32.

In addition, since both Lloyd and Kump merely teach that each instrument processor is coupled to only one instrument, the updating program code is sent to the only one instrument coupled to the corresponding instrument processor. Therefore, Lloyd and Kump also fail to teach “the first computer, upon receipt of the program update, is configured to transfer the program update to one of the at least two different instruments coupled to the first control computer *without transferring the program update to another one of the at least two different instruments*” as recited in amended claim 10 and “transmitting the program code from the first control computer to one of the at least two different measuring instruments coupled to the first control computer *without transmitting the program code from the at least one of the control computers to another one of the at least two different measuring instruments*” as recited in amended claim 32.

With regard to Humphrey, since Humphrey nowhere teaches that those multiple GPIB instruments are different instruments, Humphrey also fails to teach “the first computer, upon receipt of the program update, is configured to transfer the program update to one of the at least two different instruments coupled to the first control computer without transferring the program update to another one of the at least two different instruments” as recited in amended claim 10 and “transmitting the program code from the first control computer to one of the at least two different measuring instruments coupled to the first control computer without transmitting the program code from the at least one of the control computers to another one of the at least two different measuring instruments” as recited in amended claim 32.

In fact, Humphrey merely discloses that the user can monitor and control the distributed GPIB instruments, but fails to teach updating the firmware of those GPIB instruments. On the other hand, Lloyd and Kump merely teach distributing program code to all (i.e., a single one) instrument coupled to the corresponding instrument processor. Accordingly, modifying Lloyd and Kump in view of Humphrey’s multiple instruments at best teaches distributing program code to *all instruments*. In other words, even if Humphrey’s instruments were different instruments, assuming *arguendo*, the combination of Lloyd, Kump and Humphrey would still fail to teach selectively transmitting the program code and updating the firmware to *less than all* of the at least two different instruments as recited in amended claims 10 and 32.

Unlike the utilized references, the present invention can selectively distribute the program code to the intended instrument(s) without distributing the program code to the unintended instrument(s). For example, as embodied in FIG. 1, the control computer 2 is coupled to two different instruments, *i.e.*, a network analyzer 5 and a spectrum analyzer 6. When the intended

instrument to be updated is the spectrum analyzer 6, the program code will only be sent from the control computer 2 to the spectrum analyzer 6, but not sent to the network analyzer 5. This feature is clearly absent from the utilized references.

With regard to the Examiner's reliance on Demke, this reference has only been relied on for its teachings related to the subject matter of dependent claims 5 and 6. Demke also fails to disclose the above combinations of elements and steps as set forth in independent claims 10 and 32. Accordingly, Demke fails to cure the deficiencies of Lloyd, Kump and Humphrey.

Accordingly, none of the utilized references individually or in combination teach or suggest the limitations of amended independent claims 10 and 32. Therefore, Applicant respectfully submits that independent claims 10 and 32 clearly define over the teachings of the utilized references.

In addition, claims 3-9, 11-16, 23, 24 and 27 depend, either directly or indirectly, from independent claims 10 and 32, and are therefore allowable based on their respective dependence from independent claims 10 and 32, which are believed to be allowable.

In view of the above remarks, Applicant respectfully submits that claims 3-16, 23, 24, 27 and 32 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

#### **Additional Claims**

Additional claims 33 and 34 have been added for the Examiner's consideration.

New dependent claim 33 recites “a second control computer of the control computers is coupled to at least one of the plurality of measuring instruments, the at least one of the plurality of measuring instruments being non-identical to the one of the at least two different measuring instruments, the step of transmitting the program code from the central computer to at least one of the control computers including transmitting the program code from the central computer to the first control computer without transmitting the program code to the second control computer.”

New dependent claim 34 recites “the control computers includes a second computer coupled to at least one of the plurality of instruments, the at least one of the plurality of instruments being non-identical to the one of the at least two different instruments, the central computer being configured to not transfer the program update to the second control computer.”

Support for the above combinations of elements and steps can be found in FIG. 1 and the corresponding descriptions of the specification as originally filed. Applicant respectfully submits that the recitations as set forth in new claims 33 and 34 are not disclosed or suggested by the references relied on by the Examiner.

Applicant respectfully submits that the features of claims 33 and 34 can avoid unnecessary program code transmission, thereby saving the network resource. For example, as embodied in FIG. 1, the control computer 2 is coupled to two different instruments, *i.e.*, a network analyzer 5 and a spectrum analyzer 6; the control computer 3 is coupled to a network analyzer 5. When the intended type of instrument to be updated is the spectrum analyzer, the program code will only be sent to the control computer 2, but not sent to the control computer 3, because there is no spectrum analyzer coupled to the control computer 3. Therefore, the

unnecessary program code transmission to the control computer 3 is prevented. This feature is clearly not shown in the utilized references.

Favorable consideration and allowance of additional claims 33 and 34 are respectfully requested.

### **Additional Cited References**

Since the remaining patents cited by the Examiner have not been utilized to reject the claims; but rather to merely show the state of the art, no further comments are necessary with respect thereto.

### **CONCLUSION**

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By

  
James T. Eller, Jr.

Registration No.: 39,538

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant

